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24 October 1963

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MEMORANDUM FOR : Chief, Intelligence Division (Special Activities)
SUBJECT : Evaluation of Parachute Proposal

25X1A 1. [] solicited proposal 2042, High Altitude Parachute Development has been evaluated and the following comments are submitted:

2. The principal problem considered by this report is observation of the fully opened main parachute canopy by ground observers.

3. The effort required per this proposal is divided into four phases. Phase I would include an extensive survey of related parachute technology, a study of visibility properties and means of minimizing them and preliminary design of a parachute system. Phase II, fabrication of test canopies and drops from low altitudes (up to 12,000 ft.). Phase III, development and production of refined canopy materials and test drops at succeeding higher altitudes including a maximum altitude test from [] Phase IV would be a series of full system tests of production type assemblies to establish reliability figures. The total cost is []

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25X1A 4. It is not considered feasible to pursue this proposal further for the following reasons:

A. The basic plastic material under consideration weighs 2.25 oz. per sq. yd. vs. parachute nylon canopy weight of 1.1 oz. per sq. yd. A plastic canopy with the drag equivalent of a 35 foot nylon canopy would weigh 15 pounds vs. seven pounds for the nylon. In addition, the considered plastic material would have to be further reinforced and this would increase the weight and increase visibility.

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B. Any plastic parachute would have to possess characteristics similar to conventional parachutes; these include total drag equivalent, qualification via environmental tests, be comparable or better in weight and bulk, operate after being packed for extended periods, possess structural strength during both static and dynamic loadings, and possess reasonable pendular stability and minimum rotation. It is not believed the type of plastic material being considered could fulfill all of the above requirements when applied to a personnel parachute.

25X1A C. In all cargo flight tests drops to date by [] the canopy has been deployed by a static line from a stable load. Deployment characteristics under these controlled conditions vs. a free falling body whose position would be random at time of opening are not comparable.



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ASD/OSA

25X1A [] ASD/OSA:gp

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- 6 - FA/OSA
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- 8 - ASD/OSA (chrono)
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